

REMARKS

Applicants thank the Examiner for checking box 12)a) of the application, indicating that all copies of the priority documents have been received.

Status of the Application

Claims 1-49 are all the claims pending in the application. By this Amendment, Applicants editorially amend claims 1, 29 and 35. The amendments to claims 1 and 41 were made for reasons of precision of language and consistency, and do not narrow the literal scope of the claims and thus do not implicate an estoppel in the application of the doctrine of equivalents.

Rejections Under 35 U.S.C. § 102

The Parat Reference

The Examiner has rejected claims 1, 2, 4 and 29 under 35 U.S.C. § 102(b) as being anticipated by *Parat*. Applicants respectfully disagree with the Examiner for the following reasons.

Parat does not disclose all of the elements of independent claim 1. For example, *Parat* does not disclose at least the “pressing body comprising a protrusion, formed on a first surface thereof, and extending substantially perpendicularly to the direction of the first groove” of independent claim 1.

Instead, *Parat* discloses a protuberance along the cap (alleged pressing body) which is used to press against each optical fiber and maintain the contact between the fiber and the block (alleged fixing body). The protuberance in *Parat* is only needed in cases where the fiber does not go beyond the surface of the block, so as to hold the fiber in the groove of the block. (See *Parat*, col. 11, ll. 53-55). This means that the protuberance is located along the same axis as, or

parallel to, the direction of the groove in the block in *Parat*. (See FIG. 14). *Parat* does not disclose a protrusion which is substantially perpendicular to the direction of the groove of the body, thus, independent claim 1 patentably distinguishes over the prior art.

As claims 2, 4 and 29 depend from claim 1 they should be allowable at least by virtue of their dependency on claim 1.

The Sherrer Reference

The Examiner has further indicated that independent claim 1, as well as dependent claims 2-4 and 18, stand rejected as allegedly being anticipated under 35 U.S.C. § 102(e) by *Sherrer*. Applicants respectfully disagree with this rejection because *Sherrer* does not disclose all of the elements of independent claim 1, and suffers from the same deficiencies as *Parat*.

Similar to *Parat*, *Sherrer* does not disclose at least the “pressing body comprising a protrusion, formed on a first surface thereof, and extending substantially perpendicularly to the first groove” of independent claim 1.

Instead, *Sherrer* teaches the use of spheres that are fit into pits, wherein the pits are not connected to the grooves that support the optical cable, in order to align the optical arrays. (See *Sherrer*, col. 5, ll. 20-26). A sphere inherently cannot be perpendicular, or parallel, to a surface, let alone a groove. *Sherrer* does not teach a protrusion extending substantially perpendicularly to the groove, thus, independent claim 1 patentably distinguishes over the prior art.

As claims 2, 3, 4 and 18 depend from claim 1 they should be allowable at least by virtue of their dependency on claim 1.

The Igarashi Reference

The Examiner has indicated that independent claim 32 as well as dependent claims 34, 35, 37, 40, 43 and 49 stand rejected as allegedly being anticipated under 35 U.S.C. § 102(b) by *Igarashi*. Applicants respectfully disagree with this rejection because *Igarashi* fails to disclose all of the elements of independent claim 32.

Specifically, *Igarashi* fails to disclose at least “a fixing body comprising a first groove formed in a first surface thereof, and a second groove formed in a second surface thereof, both extending in a first direction to support the optical fiber along its axial direction” as recited in independent claim 32.

The Examiner points to grooves 6 and 2 of *Igarashi* as allegedly anticipating the claimed grooves of the cited application. However, Applicants believe that the Examiner’s argument is misplaced. In *Igarashi*, grooves 6 and 2 of FIG. 1, the figure relied on by the Examiner, run perpendicular to each other and thus cannot both “extend[] in a first direction.” Further, only one groove in *Igarashi* supports the optical fiber in its axial direction, while the other groove “controls the relative movement of the loading tool.” (See *Igarashi*, Abstract). Thus, *Igarashi* fails to disclose all of the elements of independent claim 32.

Because *Igarashi* fails to disclose all of the elements of independent claim 32, independent claim 32 patentably distinguishes over the prior art. As claims 34, 35, 37, 40, 43 and 49 depend from claim 32, they should be allowable at least by virtue of their dependency on claim 32. They should also be allowable because of additional limitations set forth therein.

For example, regarding dependent claim 40, as mentioned above regarding claim 32, groove 6 in *Igarashi* does not extend in the same direction as groove 2. FIG. 1 does not provide measurements as to the size of each groove and because the two grooves do not extend in the same direction, FIG. 1 cannot teach a difference in the size of the two grooves as related to each other. Accordingly, Applicants believe that claim 40 is separately patentable over *Igarashi*.

Rejections Under 35 U.S.C. § 103(a)

The Combination of Parat and Tamekuni

The Examiner has indicated that claim 5 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Parat*, as applied to claim 1, in view of *Tamekuni*. Applicants respectfully disagree. First, it has long been held that, “to establish *prima facie* obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art.” *In re Royka*, 490 F.2d 981 (CCPA 1974). Applicants disagree with this rejection because, for reasons cited in *The Parat Reference* section, *Parat* does not teach or suggest the combination of elements as set forth in independent claim 1. *Tamekuni* is only cited for its alleged disclosure of V-shapes and trapezoidal shapes for holding optical fibers and as such does not cure the deficient disclosure of *Parat*. Thus, dependent claim 5 should be allowable at least by virtue of its dependency on claim 1.

The Combination of Sherrer and Tamekuni

The Examiner has indicated that claim 5 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Sherrer*, as applied to claim 1, in view of *Tamekuni*.

Applicants respectfully disagree with this rejection. For reasons analogous to those cited in *The Sherrer Reference* section, *Sherrer* does not teach or suggest the combination of elements as set forth in independent claim 1. *Tamekuni* is only cited for its alleged disclosure of V-shapes and trapezoidal shapes for holding optical fibers and as such does not cure the deficient disclosure of *Sherrer*. Thus, dependent claim 5 should be allowable at least by virtue of its dependency on claim 1.

The Combination of Parat, Tamekuni and the Applicants' Prior Art

The Examiner has rejected claims 3, 6-11, 30-31 and 46 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Parat* as applied to claims 1, 2 and 4, in view of *Tamekuni* as applied to claim 5, and in further view of *Applicants' Admitted Prior Art*. Applicants respectfully disagree with this rejection because neither *Tamekuni* nor the *Applicants' Prior Art* cure the deficient disclosure of *Parat*, as described in *The Parat Reference* section. Specifically, the Applicants' prior art fails to teach or suggest "a protrusion, formed on a first surface thereof, and extending substantially perpendicularly to the first groove" of independent claim 1, as can be clearly seen from FIG. 3, the figure relied on by the Examiner. As a result, dependent claims 3, 6-11, 30-31 and 46 should be allowable at least by virtue of their dependency on claim 1.

Applicants also believe that the Examiner has not provided a proper motivation for combining the three cited references. The Examiner asserts that one of ordinary skill in the art would combine the line *Applicants' Prior Art* with *Parat* and *Parat* in view of *Tamekuni* to restrict movement of the optical fiber in a Y-axis direction. However, Applicants believe that the Examiner is incorrect in this assertion.

Parat already discloses a optical fiber placed in a V shaped housing and having a “cap with a protuberance, which attach[es] the fibre[sic] against the respective walls of the blocks which form a crossing V.” In the disclosure of *Parat*, the ridgeline of the optical fiber is located at the same level or lower than the V shaped housing of the fiber. The Examiner has failed to indicate why one skilled in the art would replace the V shaped housing in *Parat* with a “stepped structure with a second groove formed in a second surface of the block (alleged fixing body) so that when the optical fiber is supported in the second groove the ridgeline of the fiber is above a first surface and below a second surface” of the *Applicants’ Prior Art*.

It has been held that if the “proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) MPEP § 2143.01.

The combination of *Parat* and the *Applicants’ Prior Art* would also result in an inferior product because if combined, only some of the optical fiber would be attached to the walls of the V shaped housing by the protuberance of *Parat*, specifically the part of the fiber located in the second groove, instead of the entire length of the fiber. If only some of the fiber is secured, the result is an inferior restriction of movement to that already disclosed by *Parat*.

Obviousness under Parat alone

The Examiner has indicated that claims 12-17 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Parat* as applied to claim 1. As discussed above, it has long been held that, “to establish *prima facie* obviousness of the claimed invention, all the claim

limitations must be taught or suggested by the prior art.” *In re Royka*, 490 F.2d 981 (CCPA 1974). Applicants respectfully disagree because, for reasons cited in *The Parat Reference* section, *Parat* does not teach or suggest the combination of elements as set forth in independent claim 1. Thus, dependent claims 12-17 should be allowable at least by virtue of their dependency on claim 1. They should also be allowable because of additional limitations set forth therein.

For example, regarding dependent claim 15, the Examiner asserts that it would have been obvious for one of ordinary skill in the art to use a prismatic shape for the protrusion as a matter of obvious design choice. However, the Examiner’s assertion is misplaced because, again relying on *In re Gordon*, the Examiner himself points out with regard to claim 12 that “the motivation for [not having a semi-rectangular cross section of the protrusion] would be to avoid sharp edges that could damage the optical fiber when pressing against it.”(O.A. p. 11). *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) (if the “proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.”); *See also MPEP § 2143.01*. Thus, it would not be obvious to one of ordinary skill in the art to obtain the invention specified by claim 15 in view of *Parat*.

Obviousness under Sherrer alone

The Examiner has rejected claims 19-27 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Sherrer* as applied to claims 1 and 18. Applicants respectfully disagree. For reasons analogous to those cited in *The Sherrer Reference* section, *Sherrer* does not teach or

suggest the combination of elements as set forth in independent claim 1 or dependent claim 18. Thus, dependent claims 19-27 should be allowable at least by virtue of their dependency on claim 1.

The Combination of Igarashi and the Applicants' Prior Art

The Examiner has rejected claims 33, 36, 44 and 45 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Igarashi* as applied to claim 32 and in further view of *Applicants' Admitted Prior Art*.

Regarding independent claim 32, the Examiner takes the position that *Igarashi* discloses most of the features therein, but concedes that *Igarashi* “does not teach a fixing body having a stepped structure with a second groove formed in a second surface of the fixing body arranged above the first surface so that when the optical fiber is supported in the second groove the ridgeline of the fiber is above the first surface and below the second surface.” (O.A., p. 14).

Nevertheless, regarding dependent claims 33 and 36, the Examiner alleges that one of ordinary skill in the art at the time of the invention would combine *Igarashi* with the teaching of the *Applicants' Prior Art* to “restrict movement of the optical fiber in a Y-axis direction.” (O.A., page 14). Applicants respectfully disagree with the Examiner, for the following reasons.

It has long been held that, if the “proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) MPEP § 2143.01. In this instance, *Igarashi* already discloses a configuration where a protrusion of the holding tool comes into contact along the axial direction of the fiber to

secure the optical fiber, and wherein the relative movement of the optical fiber is further secured by the second grooves placed perpendicular to the first groove. However, if this structure was somehow modified to include the stepped structure, wherein the second groove would be located above the first groove, the second groove could no longer function to provide relative movement support. Further, *Igarashi* would have to be modified to provide for a deeper tip plane, so that the tip plane could reach the optical fiber in the second groove and secure the fiber in the axial direction.

In such a case, the fiber would no longer be “always pressed and fixed with high accuracy at a fixed position,” and would eliminate the purpose of *Igarashi*.

Second, the Examiner’s alleged motivation to modify the configuration of *Igarashi* to - restrict movement of the optical fiber in a Y-axis direction - is specifically accomplished by the specific configuration of *Igarashi* (“In such a way, the optical fiber is always pressed and fixed with high accuracy at a fixed position...” (*Igarashi*, Abstract)). Thus, one of skill would not have been motivated to modify *Igarashi* to provide a feature that it already possesses.

Accordingly, Applicants respectfully disagree that one of skill would have been motivated to modify *Igarashi* as the Examiner alleges, and therefore dependent claims 33 and 36 should be patentable over the *Applicants’ Prior Art*.

Regarding dependent claims 44 and 45, the *Applicants’ Prior Art* also fails to cure the deficient disclosure of *Igarashi* as described in *The Igarashi Reference* section. The *Applicants’ Prior Art* is only cited for its alleged disclosure of fusion splicing optical fibers, wherein the optical fibers are fixed by holding systems, and as such does not cure the deficient disclosure of

Igarashi. Thus, dependent claims 44 and 45 should be allowable at least by virtue of their dependency on claim 32.

Obviousness under Igarashi alone

The Examiner has rejected claims 38, 39, 41 and 42 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Igarashi* as applied to claim 32. Applicants respectfully disagree. For reasons analogous to those cited in *The Igarashi Reference* section, *Igarashi* fails to teach or suggest the combination of elements as set forth in independent claim 32. Thus, dependent claims 38, 39, 41 and 42 should be allowable at least by virtue of their dependency on claim 32.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 10/798,422

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Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

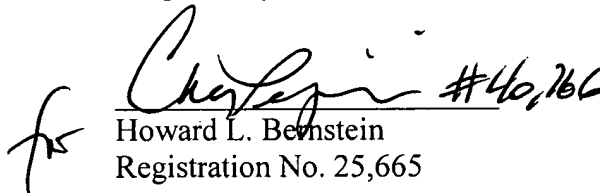
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